Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) An apparatus for determining a subsurface characteristic of a formation penetrated by a wellbore, comprising:

- an anchor device engaged with the wellbore at a selected location;
- a vibratory source at a surface location coupled to the anchor causing the anchor to impart seismic energy into the formation; and
- a control unit for control of the vibratory source and for determining a subsurface geologic characteristic of the formation from detection of said seismic energy imparted into the formation.

2. (Previously presented) The apparatus of claim 1 further comprising a power source to drive the vibratory source.

3. (Previously presented) The apparatus of claim 1, wherein the power source is selected from a group consisting of (i) a hydraulic unit; (ii) an electrically-operated device; and (iii) a pneumatic device.

4. (Previously presented) The apparatus according to claim 2 further comprising at least one sensor to provide a measure of a parameter of interest.

5. (Previously presented) The apparatus of claim 4, wherein the parameter of interest is one of (i) motion of the anchor; (ii) load on the anchor; (iii) load on a tubular string coupled between the anchor and the vibratory source; or (iv) motion of the tubular string.

6. (Previously presented) The apparatus of claim 1 further comprising:

(i) a first sensor proximate the anchor to measure a selected parameter of interest; and

(ii) a second sensor spaced-apart from the first sensor to determine the transmissibility of power from the vibratory source to the anchor.

7. (Previously presented) The apparatus of claim 1 further comprising a processor to control the operation of the vibratory source.

8. (Cancelled)

9. (Previously presented) The apparatus of claim 1; wherein the control unit includes a computer.

10. (Previously presented) The apparatus of claim 1, wherein the control unit controls frequency of vibration in the vibratory source in response to the sensed parameter of interest.

11. (Previously presented) The apparatus of claim 10, wherein the control unit controls frequency of vibration in accordance with programmed instructions provided to the control unit.

12. (Currently amended) A system for obtaining seismic geologic data relating to a formation, comprising:

- an anchor device engaged with a wellbore at a selected location;
- a vibratory source at a surface location coupled to the anchor causing the anchor to induce seismic energy into the formation; and
- at least one detector placed spaced-apart from the anchor, to detect seismic signals responsive to seismic energy, and indicative of a subsurface geologic condition, imparted in the formation by the anchor.

13. (Previously presented) The system of claim 12 further comprising a control unit to control the vibratory source.

14. (Previously presented) The system of claim 13, wherein the control unit controls the vibratory source in response to the signals detected by the at least one detector.

15. (Previously presented) The system of claim 12, wherein the at least one detector is placed at a location selected from one of (i) surface location; (ii) a location in the borehole; (iii) a secondary borehole formed spaced-apart from the borehole; or (iv) a secondary borehole that forms a part of a multibore system containing the borehole.

16. (Previously presented) The system of claim 12, wherein the at least one detector includes a plurality of spaced-apart detectors.

17. (Previously presented) The system of claim 12, wherein said processor processes the signals detected by at least one detector.

18. (Currently amended) A method for inducing seismic energy in a formation penetrated by a wellbore, comprising:

- coupling a tubular string between a downhole anchor and a surface vibratory source;
- vibrating the tubing string to generate a seismic wave in the formation at the anchor; and
- determining a subsurface geologic characteristic of the formation from detection of said seismic energy imparted into the formation.

19. (Previously presented) The method of claim 18 further comprising for providing at least one sensor measuring a parameter of interest, wherein the parameter of interest is one of (i) load on the anchor; (ii) load on the tubular string proximate the vibratory source; (iii) vibratory motion of the anchor; or (iv) vibratory motion of the tubular string proximate the vibratory source.

20. (Previously presented) The method of claim 19 further comprising controlling frequency of operation of the vibratory source with a control unit, said control unit having a

processor acting according to programmed instructions, said control unit controlling the frequency of the vibratory source in response to the sensed parameters of interest.

21. (Previously presented) The method of claim 17 further comprising providing a first sensor proximate the anchor to measure a selected parameter of interest and a second sensor spaced-apart from the first sensor, said second sensor measuring the same parameter of interest for determining transmissibility of power from the vibratory source to the anchor.

22. (Previously presented) The method of claim 21, wherein the parameter of interest is one of (i) motion of the anchor; (ii) load on the anchor; (iii) load on a tubular string coupled between the anchor and the vibratory source; and (iv) motion of the tubular string.

23. (Currently amended) A method for obtaining seismic data, comprising:

- engaging an anchor in a wellbore in a subsurface formation at a selected downhole location;
- coupling the anchor to a surface located vibratory source;
- energizing the vibratory source to impart seismic energy through the anchor to the formation;
- sensing the seismic energy by at least one detector spaced-apart from the anchor; and
- determining a subsurface geologic characteristic of the formation from detection of said seismic energy imparted into the formation.

24. (Previously presented) The method of claim 23, further comprising controlling the vibratory source with a control unit.

25. (Previously presented) The method of claim 23, further comprising controlling the vibratory source with a control unit in response to signals sensed by the at least one detector.

26. (Previously presented) The method of claim 23, wherein the at least one detector is placed at a location selected from one of (i) surface location; (ii) a location in the borehole; (iii) a secondary borehole formed spaced-apart from the borehole; or (iv) a secondary borehole that forms a part of a multibore system containing the borehole.

27. (Previously presented) The system of claim 12, wherein the anchor device is a slip anvil adapted to act cooperatively with a driver coupled to the vibratory source to generate a broadband seismic signal in the formation when said driver impacts said slip anvil.

28. (Previously presented) The system of claim 12, wherein the seismic energy is one of (i) a single frequency and (ii) a swept frequency.

29. (Previously presented) The system of claim 12, wherein the seismic energy is a broadband signal.

30. (Previously presented) The method of claim 23, wherein the step of energizing the vibratory source to impart seismic energy through the anchor to the formation includes energizing the vibratory source causing a driver coupled to the vibratory source to impact the anchor, the anchor comprising a slip anvil, and imparting a broad band signal through the anchor to the formation.

31. (Previously presented) The method of claim 23, wherein the seismic energy is one of (i) a single frequency and (ii) a swept frequency.

32. (Previously presented) The method of claim 23, wherein the seismic energy is a broadband signal.

33. (Previously presented) The system of claim 12, wherein the at least one detector is a geophone.

34. (Previously presented) The method of claim 23, wherein the at least one detector is a geophone.

35. (Previously presented) The system of claim 12, wherein the at least one anchor includes a plurality of fixed anchors located at a corresponding plurality of predetermined locations.

36. (Previously presented) The method of claim 23, further comprising repeating the steps of claim 23 at predetermined times to determine changes in formation properties over time.